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09/727,166
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Art Unit 3673

CLAIM LISTING

- 1-15 (previously cancelled)
- 16-17 (allowed)
- 18-50 (previously cancelled)
51. (allowed)
52. (previously cancelled)
53. (allowed)
54. (previously cancelled)
55. (allowed)
56. (allowed)
57. (allowed)
58. (allowed)
59. (allowed)
60. (allowed)
61. (currently amended and previously withdrawn) A self-sharpening rotatable cutting element for use on the body of an earth-boring drag bit off center from the axis of rotation of said bit, the element comprising:

a contact structure including a cutting tip structure and a cutting tapered structure

both being concentric with the overall element, the contact structure is

generally conical with a generally obtuse included angle. ~~formed generally~~

along the same axis;

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a mounting structure carrying said cutting tip and tapered structure;
a non-cylindrical structure for the engagement and removal of the element;
a first material of wear resistance on the cutting tip;
a second region of material of a second wear resistance on the tapered structure fully surrounding and supporting the first material wherein the wear resistance of said first material is greater than the wear resistance of said second material, said tapered structure surrounds and generally converges with said tip structure;
a portion of said first material is generally contained within said second material;
a portion of the mounting structure is generally symmetrical in at least three equally spaced radial directions, and;
the axis of the mounting structure is generally aligned with the axis of the tapered structure.

62. (previously withdrawn) A cutting element as in claim 61, wherein said first material is in the form of a column positioned on the axis of the contact structure.
63. (previously withdrawn) A cutting element as in claim 61 wherein the cross-sectioned area of said material of first hardness is less than 10% of the total cross-sectioned areas of the contact structure.
64. (previously withdrawn) A cutting element as in claim 61, wherein the material of wear resistance on the tapered structure is at least 300 points softer than the wear resistant material of the cutting tip.